5

10

15

Abstract of the Disclosure

Methods and systems for performing stateful signaling transactions in a distributed processing environment are disclosed. A method for performing stateful signaling transactions in a distributed processing environment includes receiving a signaling message at a routing node, such as a signal transfer point. The signaling message is distributed to one of the plurality of stateful processing modules. The receiving stateful processing module buffers the signaling message and initiates a stateful transaction based on the signaling message. Initiating the stateful transaction may include generating a query message and inserting a stateful processing module identifier in the query message. The query message is sent to an external node, such as an SCP, which formulates a response. The SCP may insert the stateful processing module in the response and send the response back to the signal transfer point. The signal transfer point decodes the response and uses the stateful processing module identifier to forward the response to the correct stateful processing module.